

REMARKS/ARGUMENTS

Claims 1-20 were pending. Claims 1, 4, 5, 6, 9, and 14 are amended herein, and claims 3, 18, 19, and 20 are canceled herein. Claims 1, 2, and 4-17 remain pending in this application.

During a telephone conversation with the Examiner on February 2, 2005, the undersigned attorney for Applicants made a provisional election of Group I, claims 1-18. Applicants hereby affirm election, without traverse, to prosecute claims 1-18, i.e. the Group I claims. Accordingly, Applicants have canceled claims 19 and 20 herein. Applicants request that claims 19 and 20 be canceled without prejudice or disclaimer as to the subject matter recited, and reserve the right to pursue the subject matter of claims 19 and 20 separately.

35 U.S.C. §102 Rejections:

Claims 1, 2, 8, 13, 14, 17, and 18 were rejected under 35 U.S.C. §102(b) as being anticipated by Lockshaw et al. (US 5,487,930). Applicants respectfully traverse this rejection.

Applicants note that pending claims 1 and 14 are independent claims. Pending claims 2 and 4-13 depend from claim 1, and pending claims 15-17 depend from claim 14.

Lockshaw et al. does not teach or disclose a joining member having a surface adapted for bonding to a surface of a skin via a layer of an adhesive material, wherein the surface has at least one ridge extending therefrom for determining a bond-line thickness of the adhesive material.

Applicants have amended claim 1 herein to recite:

1. A joining member for mechanically joining a skin to a supporting rib, the joining member comprising:

- a first surface adapted for bonding to a surface of the skin via a layer of a first adhesive material, wherein the first surface comprises at least one ridge extending therefrom for determining a bond-line thickness of the first adhesive material; and
- a second surface opposite the first surface and comprising a groove having an inner surface adapted for receiving and bonding to an outer edge of the rib via a layer of a second adhesive material.

Applicants have amended claim 14 herein to recite:

14. A structure for supporting two opposed skins, the structure comprising:

- a rib having a pair of opposed outer edges;
 - a pair of joining members, each comprising:
 - a first surface adapted for bonding to a surface of one of the skins via an adhesive layer, wherein the first surface comprises at least one ridge extending therefrom for determining a bond-line thickness of the adhesive layer;
 - a second surface opposite the first surface and comprising a groove having an inner surface adapted for receiving and bonding to an outer edge of the rib via another adhesive layer;
- wherein one of the outer edges of the rib extends into the groove of a corresponding one of the pair of joining members and is bonded to the corresponding joining member via a first adhesive layer formed in the groove of the corresponding joining member; and
- wherein the other outer edge of the rib extends into the groove of the other joining member and is bonded to the other joining member via a second adhesive layer formed in the groove of the other joining member.

In the instant application, Figs. 2A and 2B show different embodiments of a joining member 208C having a surface 300 adapted for attaching to a skin via an adhesive layer. In the embodiment of Fig. 2A the joining member 208C has two ridges 302 extending from the

surface 300, and in the embodiment of Fig. 2B the joining member 208C has a single ridge 310 extending from the surface 300. The ridges 302 and 310 determine a bond-line thickness of the adhesive material between the surface 300 of the joining member 208C and the adjacent surface of the skin.

For at least the above reasons, Applicants assert Lockshaw et al. fails to teach or disclose all of the elements and limitations of pending independent claims 1 and 14, and believe independent claims 1 and 14 are allowable. Applicants also believe that pending claims 2-13 that depend from claim 1, and pending claims 15-17 that depend from claim 14 are also allowable for at least the above reasons.

Claims 1, 2, 8-11, and 13 were rejected under 35 U.S.C. §102(b) as being anticipated by Hoffman et al. (US 5,134,812). Applicants respectfully traverse this rejection.

Applicants note that pending claim 1 is an independent claim, and pending claims 2 and 4-13 depend from claim 1.

Hoffman et al. does not teach or disclose a joining member having a surface adapted for bonding to a surface of a skin via a layer of an adhesive material, wherein the surface comprises at least one ridge extending therefrom for determining a bond-line thickness of the adhesive material.

Applicants have amended claim 1 as recited above.

In the Office Action, the Examiner refers to a connector 66 shown in Fig. 6 of Hoffman et al. According to Hoffman et al., "In accordance with the invention, another embodiment of a connector 66 is shown by FIG. 6. Connector 66 is formed from a memory alloy and functions like connector 20 as described. Connector 66 is structurally distinguishable, however, from connector 20 since it is configured in a generally U-shaped cross section. Operatively, flange edges 68 and 70 of abutting plates 72 and 74, respectively, are clamped together in a

connector channel 76 when the connector 66 under goes transformation to the austenite phase.” (Hoffman et al., col. 4, lines 13-22, emphasis added.)

Applicants assert that the connector 66 of Hoffman et al. relies on at least friction, and possibly on physical deformation of contacting surfaces, to join together the flange edges 68 and 70 of the abutting plates 72 and 74 via clamping. Hoffman et al. does not teach or disclose a joining member having a surface adapted for bonding to a surface of a skin via a layer of an adhesive material. Further, Hoffman et al. does not describe a joining member having a surface adapted for bonding to a surface of a skin via a layer of an adhesive material, wherein the surface comprises at least one ridge extending therefrom for determining a bond-line thickness of the adhesive material.

As stated above, in the instant application, Figs. 2A and 2B show different embodiments of a joining member 208C having a surface 300 adapted for attaching to a skin via an adhesive layer. In the embodiment of Fig. 2A the joining member 208C has two ridges 302 extending from the surface 300, and in the embodiment of Fig. 2B the joining member 208C has a single ridge 310 extending from the surface 300. The ridges 302 and 310 determine a bond-line thickness of the adhesive material between the surface 300 of the joining member 208C and the adjacent surface of the skin.

Regarding claim 10, Applicants assert Hoffman et al. does not teach or disclose a joining member having a second surface opposite a first surface and comprising a groove having an inner surface adapted for receiving and bonding to an outer edge of a rib via a layer of a second adhesive material, wherein the groove extends along a longitudinal axis of the joining member, and wherein the inner surface of the groove comprises a pair of substantially planar sidewall surfaces, and wherein each of the pair of sidewall surfaces comprises a ridge, and wherein each of the ridges has an upper surface elevated above the corresponding substantially planar sidewall surface, and wherein the elevated upper surface determines a bond-line thickness of the second adhesive material.

Regarding claim 11, Applicants assert Hoffman et al. does not teach or disclose a joining member having a second surface opposite a first surface and comprising a groove having an inner surface adapted for receiving and bonding to an outer edge of a rib via a layer of a second adhesive material, wherein the groove extends along a longitudinal axis of the joining member, and wherein the inner surface of the groove comprises a pair of substantially planar sidewall surfaces, and wherein each of the pair of sidewall surfaces comprises a ridge, and wherein each of the ridges has an upper surface elevated above the corresponding substantially planar sidewall surface, and wherein the elevated upper surface determines a bond-line thickness of the second adhesive material, and wherein each of the ridges is positioned at an edge of corresponding sidewall surface near an opening of the groove.

Regarding claim 13, Applicants assert Hoffman et al. does not teach or disclose a joining member for mechanically joining a skin to a supporting rib, wherein the skin forms at least part of an airfoil.

For at least the above reasons, Applicants assert Hoffman et al. fails to teach or disclose all of the elements and limitations of pending independent claim 1, and believe independent claim 1 is allowable. Applicants also believe that pending claims 2 and 4-13 that depend from claim 1 are also allowable for at least the above reasons.

Claims 1, 2, 8, 13, 14, and 18 were rejected under 35 U.S.C. §102(e) as being anticipated by McKague, Jr. et al. (US 6,520,706). Applicants respectfully traverse this rejection.

Applicants note that pending claims 1 and 14 are independent claims. Pending claims 2 and 4-13 depend from claim 1, and pending claims 15-17 depend from claim 14.

McKague, Jr. et al. does not teach or disclose a joining member having a surface adapted for bonding to a surface of a skin via a layer of an adhesive material, wherein the surface has at least one ridge extending therefrom for determining a bond-line thickness of the adhesive material.

Applicants have amended claims 1 and 14 as recited above.

As stated above, in the instant application, Figs. 2A and 2B show different embodiments of a joining member 208C having a surface 300 adapted for attaching to a skin via an adhesive layer. In the embodiment of Fig. 2A the joining member 208C has two ridges 302 extending from the surface 300, and in the embodiment of Fig. 2B the joining member 208C has a single ridge 310 extending from the surface 300. The ridges 302 and 310 determine a bond-line thickness of the adhesive material between the surface 300 of the joining member 208C and the adjacent surface of the skin.

Regarding claim 13, Applicants assert McKague, Jr. et al. does not teach or disclose a joining member for mechanically joining a skin to a supporting rib, wherein the skin forms at least part of an airfoil.

For at least the above reasons, Applicants assert McKague, Jr. et al. fails to teach or disclose all of the elements and limitations of pending independent claims 1 and 14, and believe independent claims 1 and 14 are allowable. Applicants also believe that pending claims 2 and 4-13 that depend from claim 1, and pending claims 15-17 that depend from claim 14, are also allowable for at least the above reasons.

35 U.S.C. §103 Rejection:

Claim 17 was rejected under 35 U.S.C. §103(a) as being unpatentable over McKague, Jr. et al. Applicants respectfully traverse this rejection.

Applicants note claim 17 depends from independent claim 14.

McKague, Jr. et al. does not teach or disclose a joining member having a surface adapted for bonding to a surface of a skin via an adhesive layer, wherein the surface has at least one ridge extending therefrom for determining a bond-line thickness of the adhesive layer.

Applicants have amended claim 14 as recited above.

As stated above, in the instant application, Figs. 2A and 2B show different embodiments of a joining member 208C having a surface 300 adapted for attaching to a skin via an adhesive layer. In the embodiment of Fig. 2A the joining member 208C has two ridges 302 extending from the surface 300, and in the embodiment of Fig. 2B the joining member 208C has a single ridge 310 extending from the surface 300. The ridges 302 and 310 determine a bond-line thickness of the adhesive material between the surface 300 of the joining member 208C and the adjacent surface of the skin.

For at least the above reasons, Applicants assert McKague, Jr. et al. fails to teach or disclose all of the elements and limitations of pending independent claim 14, and believe independent claim 14 is allowable. Applicants also believe that pending claims 15-17 that depend from claim 14 are also allowable for at least the above reasons.

Allowable Subject Matter

In the Office Action, the Examiner stated that claims 3-7, 12, 15, and 16 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form.

Conclusion

In the present response, Applicants have addressed all of the claim objections and rejections cited in the Office Action. In view of the amendments to the claims and Applicants' remarks, Applicants believe pending claims 1, 2, and 4-17 are in condition for allowance, and respectfully requests allowance of pending claims 1, 2, and 4-17.

Accordingly, the present amendment is believed to contain a complete response to the issues raised in the Office Action. Full reconsideration is respectfully requested. If the Examiner

has any questions, comments or suggestions, the undersigned attorney earnestly requests a telephone conference.

With the amendments to the claims presented herein, there are now 2 independent claims and 16 total claims in the application.

In closing, I wish to express my appreciation for your kind consideration and helpful comments.

Respectfully submitted,


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I hereby certify that this correspondence is being sent via facsimile to the Commissioner for Patents at 703-872-9306 on 5-24-05 date of deposit.

Signature: 
Eric Karich